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DR 1090
NOVEMBER 1979

AD

LEVEL ✓

METEOROLOGICAL DATA REPORT

12822A LANCE
Missile No. 4883
Round No. 338-NCL
08 November 1979

SD DTIC
ELECTE
APR 2 1980

by

White Sands Meteorological Team

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)			
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 12822A Lance, Missile Number 4883, Round Number 338-NCL are presented in tabular form.			

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INTRODUCTION

12822A Lance, Missile Number 4883, Round Number 338 NCL, was launched from Red Rio, White Sands Missile Range (WSMR), New Mexico, at 0730 MST, 08 Nov 79. The scheduled launch time was 0800 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the Red Rio Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

No Pibal data provided

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to as high as possible feet in 500-feet increments.

SITE AND TIME

Red Rio 0720 MST
Jallen 0800 MST

Accession For	
NTIS	ORALI
DDC TAB	<input type="checkbox"/>
Unarmoured	<input type="checkbox"/>
Justification _____	
By _____	
Distribution/ _____	
Availability _____	
Dist.	Avail and/or special
A	<i>[Handwritten signatures and initials over the form]</i>

TABLE 1. Surface Observations taken at 0720 MST,
08 November 1979, at Red Rio, 12822A
Lance, Missile Number 4883, Round Number
338 NCL.

ELEVATION	6331.9	FT/MSL
PRESSURE	800.9	MBS
TEMPERATURE	8.9	°C
RELATIVE HUMIDITY	83	%
DEW POINT	6.2	°C
DENSITY	984	GM/M ³
WIND SPEED	14	KTS
WIND DIRECTION	220	DEGREES
CLOUD COVER	10	SC

STATION ALTITUDE 6331.0 FEET ASL
8 NOV. 73 6720 HRS MST.
ASCENSION NO. 2

SIGNIFICANT LEVEL DATA
342330000
REG REG
TABLE 2

GEODETIC COORDINATES
33° 7' 6.50 LAT DEG
106° 24' 9.50 LON DEG

PRESSURE MILLIBARS	STATION ALTITUDE MSL FET	AIR TEMPERATURE SEGMENT SIGNIFICANT	AIR TEMPERATURE SEGMENT CERTAIN	REL.HUM. PERCENT
500.9	9301.9	9°.9	9°.6	63.0
756.0	7553.1	5°.6	5°.0	92.0
763.0	9643.6	5°.5	5°.4	99.0
553.0	11745.5	-1°.7	-1°.0	99.0
546.0	12694.3	-3°.0	-3°.1	39.0
562.4	15307.5	-8°.5	-8°.6	99.0
561.4	15507.9	-9°.7	-9°.6	99.0
539.4	17162.5	-12°.9	-13°.8	33.0
522.0	17465.7	-14°.4	-15°.4	39.0
592.0	16565.0	-10°.0	-12°.0	65.0
465.2	29331.3	-20°.1	-22°.3	65.0
431.6	24196.5	-24°.0	-26°.9	77.0
412.4	24236.3	-26°.1	-29°.6	71.0
406.4	24109.1	-28°.0	-30°.5	72.0
567.4	25763.3	-22°.5	-27°.6	57.0
561.4	25129.7	-29°.8	-40°.5	54.0
353.6	26247.0	-31°.5	-44°.5	26.0

STATION ELEVATION 6331.86 FEET "SL
3 NOV. 79 6720 HIS "SL
ASCENSIO. 40. 2

二〇〇〇年十二月

TABLE 3

STATION ALTITUDE 6531.5 FEET A.S.L.
S. N. Y. 79
ASCE:51.0A 1.0.

UPPER AIR WIND,
312500 UTC
ZU 410

TABLE 3 (cont)

DEUTERIUM LIQUID A.S.L. FEET	PRESSURE MILLIBARS A.S.L.	TEMPERATURE CENTIGRADES	REL.HUM. PERCENT	WIND SPEED METERS ANOIS	WIND DIRECTION DEGREES N. 075	WIND DATA SPREAD INDEX	WIND GROWTH EFFECTIVE INDEX
4600.0	367.5	-31.1	-43.6	27.6	52.0	000.1	1.600119

STATION COORDINATES
33.77455 LAT DEG
165.24993 LONG DEG

STATION ALTITUDE 6351.00 FEET MSL
27° 47'. 79" LAT
45° 54.00" LONG

MEASUREMENTS
IN INCHES
AND FEET

TABLE 4

GEODETIC COORDINATES
33° 77' 50" LAT deg
106° 24' 93" LONG deg

PRESSURE	GEODETIC ALTITUDE	TEMPERATURE	AIR DENSITY	WIND DIRECTION	WIND VELOCITY	WIND DIA.	WIND SPEED
IN MILLIBARS	FEET	DEGREES	DEGREES	DISTANCE	DEGREES	DISTANCE	IN KNOTS
200.0	6350.0	6.0	6.1	05.	246.4	14.1	
750.0	8191.0	4.5	5.0	20.	235.4	24.6	
700.0	9933.0	.5	.4	245.0	245.0	34.7	
650.0	11362.0	-2.5	-2.0	251.5	30.0		
600.0	13751.0	-7.4	-6.0	249.5	30.7		
550.0	15160.0	-10.0	-11.0	247.5	40.5		
500.0	16562.0	-16.0	-12.0	246.5	44.4		
450.0	17960.0	-21.6	-20.4	255.7	54.2		
400.0	19372.0	-28.0	-30.0	254.1	55.1		

CHART NO. 111111
SOUTH
106.49511 LAT E
145 DEG. 52' 50.0 SEC. N SL

SIGNIFICANT LEVEL DATA
31290, 0145
JUL 1951

TABLE 5

POSITION SIGHTING LEVEL POINTS	AIR PRESSURE IN MILLIBARS	REFRACTIVE INDEX	TEMPERATURE IN DEGREES CELSIUS	RELATIVE HUMIDITY PERCENT
870.4	9951.6	1.04	0.0	16.0
856.0	9938.9	1.08	7.9	77.0
850.0	9702.3	1.02	6.2	73.0
825.4	9512.1	1.09	5.9	77.0
721.5	9145.1	3.3	-1.2	76.0
712.4	9497.2	2.9	-1.9	76.0
700.0	9953.2	0.7	-2.4	71.0
667.0	111193.5	-1.3	-2.0	66.0
641.0	14253.7	-3.9	-7.2	74.0
624.6	12951.7	-5.1	-5.4	99.0
622.0	15939.4	-5.9	-6.0	99.0
590.2	14001.2	-6.6	-6.7	99.0
596.9	16164.2	-7.7	-7.3	99.0
562.4	14728.1	-8.9	-12.0	78.0
571.6	15194.8	-10.3	-16.9	58.0
550.0	15175.0	-12.7	-11.4	49.0
524.6	17363.8	-14.1	-10.2	34.0
517.6	17742.9	-14.0	-20.4	34.0
500.0	15535.1	-16.8	-20.0	72.0
493.6	16691.3	-17.1	-19.7	46.0
474.0	19631.2	-18.4	-16.5	99.0
465.8	20400.5	-19.9	-21.0	36.0
422.4	22705.3	-23.2	-35.0	31.0
400.0	23070.3	-25.3	-43.1	17.0
393.0	24398.0	-26.0	-45.4	14.0
355.4	26704.5	-31.0	-46.4	16.0
340.6	27703.5	-33.0	-50.7	15.0
322.0	29058.1	-34.5		
300.0	30670.8	-39.1		
264.6	33445.7	-46.1		
230.0	34701.3	-47.5		
223.2	39567.2	-52.1		
213.6	37500.3	-55.6		
206.9	39442.8	-58.4		
174.2	42274.2	-63.1		
173.0	42015.1	-60.6		
170.0	42774.2	-60.9		
156.0	45110.6	-66.6		
139.4	46795.7	-68.6		
125.4	43750.0	-67.3		

STATION ALTITUDE 4651.00 FEET "SL
8 AUG. 19 0900 HRS "ST
ASCE-S10 1:0. 145

SIGNIFICANT LEVEL DATA
3120030145
WALLEN

TABLE 5 (cont)

PRESSURE	GEOMETRIC ALTITUDE MILLIBARS ASL FEET	TEMPERATURE AIR DEPRESST. DEGREES CENTIGRADE	REL. HUM. PERCENT
118.4	50014.5	-64.3	
111.6	51163.2	-65.6	
101.8	53343.2	-66.5	
100.0	52403.5	-65.2	
99.4	53587.1	-62.5	
99.4	56366.7	-59.7	
95.6	57047.5	-59.0	
70.0	60565.0	-63.5	
50.0	67595.0	-58.2	
46.6	69060.6	-58.0	

20-2

S.T. 1200 ALTITUDE 4051.00 FEET MSL
8 AUG. 79 2300 HRS MST
RSC: S, J : 40. 145

UPPER AIR SURVEY
JALLET

GEOGRAPHIC COORDINATES
35.15712 LAT LEG
106.49511 LONG LEG

TABLE 6

SEASCAPE PRESSURE	TEMPERATURE	REL.HUM. PERCENT	DEVIAT. OF SOUND METER	WIND DATA SPEED, KNOTS	INDEX OF REFRACTION
ALTIMETER IN FEET	AIR TEMPERATURE DEGREES CELSIUS	ATMOSPHERE DEGREES CELSIUS	ATMOSPHERE DEGREES CELSIUS	DIRECTLY DEGREES	
4651.0	870.4	9.4	96.0	1067.9	170.0
4200.9	855.7	10.4	95.5	1055.2	195.0
4000.6	850.4	11.3	7.9	1039.8	210.5
4000.6	855.2	11.4	7.0	1039.9	218.0
4600.3	847.9	11.2	6.4	1035.3	223.0
5000.6	840.8	11.1	6.9	1023.2	220.0
5200.6	834.7	11.0	5.6	1019.1	223.0
5400.6	826.7	10.9	5.2	1012.0	230.0
5800.3	822.5	10.7	4.3	1005.5	237.7
5800.6	816.6	10.3	4.6	999.6	231.5
5000.6	810.5	9.9	4.5	988.2	232.5
5200.0	804.0	9.5	4.0	985.0	233.5
5400.0	798.6	9.0	3.7	982.2	235.2
5600.0	792.6	8.6	3.4	979.5	230.7
5800.0	785.9	8.2	3.1	976.5	238.1
7000.5	751.1	7.2	2.8	970.4	239.4
7200.5	775.4	7.7	2.5	971.2	244.7
7400.5	769.7	7.0	2.2	971.7	242.4
7600.2	769.0	6.5	1.9	972.2	243.9
7600.5	755.0	6.1	1.6	972.7	240.3
7800.3	752.3	5.7	1.3	973.2	240.7
7200.3	747.2	5.3	1.0	973.7	247.9
6200.0	741.7	4.9	0.7	974.2	241.1
6400.0	732.5	4.4	0.5	974.6	242.1
6500.0	730.9	4.0	0.0	975.1	243.0
6500.0	725.5	3.6	-0.3	975.6	244.0
9200.0	729.1	3.2	-0.6	976.0	904.9
9400.0	714.7	3.0	-0.8	976.0	946.7
9400.6	709.4	2.9	-1.2	977.2	946.4
9600.0	700.1	1.4	-1.7	979.4	894.3
9600.0	695.5	1.4	-2.2	81.2	821.3
10200.0	695.5	0.2	-2.5	32.0	845.0
10400.0	680.2	-0.2	-2.3	32.6	875.9
10500.0	677.3	-1.0	-1.7	83.0	870.6
10600.0	677.3	-1.0	-2.2	-3.3	94.4
11600.0	672.7	-1.4	-3.6	81.2	880.7
11200.0	667.6	-1.3	-3.3	35.2	869.1
11400.0	662.5	-2.2	-4.6	85.0	854.8
11600.0	657.4	-2.6	-5.4	83.7	849.7
11600.0	652.4	-3.0	-5.4	31.4	844.0

STATION ALTITUDE 4051.0 FT EFT MSL
8.4.V. 79 5000 FRS MSI
ASCENSIION .0. 145

UPPER AIR DATA
312000JUL45
JALLEN

TABLE 6 (cont)

GEODETIC COORDINATES
33.15712 LAT DEG
106.49511 LONG DEG

STATION ALTITUDE	PRESSURE	TEMPERATURE	REL.HUM.	DENSITY	WIND DATA	INDEX
MSL FEET	MLIARS	AIR DEGREES CELSIUS	PERCENT	GR/CURIC	SPEED KILOMETERS HOUR	OF REFRACTION:
12500.0	647.4	-3.4	76.9	834.4	640.5	1.000205
12400.0	642.5	-3.3	77.7	829.4	640.0	1.000203
12300.0	637.5	-4.2	79.9	824.0	639.6	1.000202
12200.0	632.6	-4.5	87.1	813.0	639.2	1.000202
12100.0	627.8	-4.9	94.3	813.2	639.9	1.000202
12000.0	622.9	-5.6	97.7	809.2	639.0	1.000201
11900.0	618.1	-5.0	99.0	804.2	637.9	1.000200
11800.0	613.4	-6.2	99.0	79.0	637.3	1.000198
11700.0	608.6	-6.3	99.0	79.7	637.1	1.000197
11600.0	603.9	-6.5	99.0	78.7	637.0	1.000195
11500.0	599.2	-6.6	99.0	78.1	636.8	1.000194
11400.0	594.5	-7.9	95.8	77.9	636.2	1.000194
11300.0	571.7	-10.3	69.0	774.4	634.6	1.000194
11200.0	567.4	-11.1	82.3	769.6	634.1	1.000193
11100.0	563.0	-9.1	74.9	765.1	633.5	1.000192
11000.0	559.6	-12.7	66.3	761.0	632.7	1.000190
10900.0	556.2	-9.7	66.3	759.2	631.9	1.000189
10800.0	552.8	-14.8	58.0	750.9	631.9	1.000188
10700.0	551.7	-10.3	56.1	752.4	631.3	1.000187
10600.0	549.5	-10.8	56.1	747.9	631.1	1.000186
10500.0	546.7	-11.3	54.3	743.5	630.5	1.000185
10400.0	544.2	-11.8	52.4	745.4	630.1	1.000184
10300.0	539.3	-12.3	50.6	739.0	629.5	1.000183
10200.0	539.5	-12.7	48.5	734.4	628.9	1.000182
10100.0	539.6	-12.7	51.4	714.2	627.7	1.000181
10000.0	545.1	-13.0	44.2	729.3	628.0	1.000180
9900.0	546.7	-13.2	32.9	724.2	628.3	1.000179
9800.0	539.4	-13.4	35.7	713.2	628.0	1.000178
9700.0	534.2	-13.7	31.4	714.2	627.7	1.000177
9600.0	545.1	-13.9	23.7	709.2	627.4	1.000176
9500.0	525.7	-14.1	25.4	704.0	627.2	1.000175
9400.0	519.5	-14.0	30.7	693.2	627.3	1.000174
9300.0	519.5	-14.3	35.7	713.2	627.0	1.000173
9200.0	515.2	-14.3	37.5	693.1	627.0	1.000172
9100.0	515.2	-14.3	46.5	689.3	626.2	1.000171
9000.0	521.4	-14.9	23.7	709.2	626.8	1.000170
8900.0	521.4	-15.6	22.4	683.5	625.4	1.000169
8800.0	507.2	-14.1	29.6	681.7	624.6	1.000168
8700.0	507.2	-14.0	30.7	677.7	624.0	1.000167
8600.0	519.5	-14.3	25.6	672.7	623.8	1.000166
8500.0	519.5	-14.3	23.8	668.0	623.4	1.000165
8400.0	491.9	-17.5	88.3	665.4	622.0	1.000164
8300.0	487.1	-16.7	91.7	653.9	622.0	1.000163
8200.0	483.1	-16.3	95.1	654.4	622.2	1.000162
8100.0	479.2	-15.5	98.5	650.1	621.7	1.000161
8000.0	475.3	-18.7	91.2	650.1	621.7	1.000160

STATION LATITUDE 4951.00 FEET MSL
A HGT. 79 0000 HRS MDT
ASCE, S.A.C. 10. 145

UPPLR AIR DATA
3120050145
JALLEN

TABLE 6 (cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	RELAT. HUM. PERCENT	DENSITY CUBIC CENTIMETERS KILOTS	SPEED OF WIND DATA DIRECTED UPRIGHT	INDEX OF REFRACTION
49500.0	471.4	-19.1	-20.0	72.8	040.9	0.41.2
49200.0	467.9	-19.5	-20.6	69.4	641.6	0.40.7
49400.0	465.6	-19.9	-21.0	86.0	637.4	0.40.2
49600.0	460.0	-20.2	-22.5	81.4	632.9	0.40.9
49800.0	459.2	-20.5	-23.4	76.0	620.5	0.40.5
50000.0	452.5	-20.7	-24.4	72.2	624.6	0.40.2
50200.0	448.6	-21.0	-25.4	97.5	619.6	0.40.8
50400.1	445.1	-21.3	-26.4	62.9	615.2	0.40.5
50600.1	441.4	-21.6	-27.5	58.5	610.4	0.40.2
50800.0	437.8	-21.8	-25.7	53.7	606.6	0.40.7
51000.0	434.2	-22.1	-29.9	49.1	602.3	0.40.4
51200.0	430.6	-22.4	-31.2	44.5	593.0	0.40.1
51400.0	427.2	-22.7	-32.5	39.8	595.6	0.40.7
51600.0	423.6	-22.9	-24.0	35.2	589.6	0.40.3
51800.0	420.1	-23.2	-35.6	30.8	585.4	0.40.0
52000.0	416.6	-23.6	-36.7	28.5	551.4	0.40.5
52200.0	413.2	-23.9	-37.9	26.1	577.4	0.40.1
52400.0	409.7	-24.3	-39.1	23.0	573.6	0.40.6
52600.0	406.3	-24.6	-40.4	21.4	569.5	0.40.2
52800.0	402.0	-25.0	-41.3	19.1	555.6	0.40.8
53000.0	398.6	-25.3	-43.2	16.8	561.6	0.40.3
53200.0	395.3	-25.5	-44.1	15.4	557.3	0.40.2
53400.0	393.0	-25.6	-45.1	14.0	553.0	0.40.0
53600.0	390.6	-26.0	-45.4	14.2	549.2	0.40.4
53800.0	388.4	-26.5	-45.6	14.3	545.0	0.41.9
54000.0	385.1	-26.9	-45.9	14.5	541.9	0.41.4
54200.0	382.9	-27.3	-46.1	14.6	533.3	0.40.8
54400.0	380.7	-27.7	-46.4	14.8	534.7	0.40.3
54600.0	378.5	-28.2	-46.7	15.0	534.1	0.40.9
54800.0	376.3	-28.6	-46.9	15.1	527.5	0.40.2
55000.0	374.1	-29.1	-47.2	15.3	524.0	0.40.7
55200.0	371.9	-29.5	-47.5	15.4	520.5	0.40.2
55400.0	370.7	-30.0	-48.0	15.6	517.0	0.40.7
55600.0	369.5	-30.3	-49.0	15.8	515.6	0.40.1
55800.0	367.2	-30.8	-49.3	15.9	510.2	0.40.5
56000.0	364.1	-31.2	-48.7	15.9	506.0	0.40.0
56200.0	361.9	-31.7	-49.2	15.6	503.4	0.40.4
56400.0	359.7	-32.2	-49.7	15.4	500.1	0.40.6
56600.0	357.5	-32.6	-50.3	15.2	496.3	0.40.2
56800.0	355.3	-33.0	-51.0	14.4*	493.4	0.40.7

* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION: ALTITUDE: 4051.00 FEET MSL
9 N.Y. 79 000 HRS NST
ASCE, 510, NO. 145

UP-PEX AIR DATA
3120030143
JULY

TABLE 6 (cont)

GEODETIC ALTITUDE IN FEET	PRESSURE IN MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. CENTIGRAGE	REL. HUM. PERCENT	ENSITY G/CUBIC METER	RELATIVE HUMIDITY KNOTS	WIND SPEED (KT.)	WIND DIRECTION DEGREE	INFLUX OF REFRACTION
29500.0	337.1	-35.3	-52.7	12.1**	439.0	603.4	205.0	118.1	1.000109
29200.0	334.2	-35.5	-54.6	9.8**	485.0	653.1	263.2	116.9	1.000108
29000.0	331.3	-35.7	-56.9	7.5**	482.1	652.6	268.4	119.7	1.000108
28800.0	328.5	-35.9	-59.9	5.2**	473.4	652.5	268.6	120.5	1.000107
28600.0	325.6	-34.2	-64.4	3.0**	474.7	602.2	268.5	121.6	1.000107
28400.0	322.8	-34.4	-74.5	.7**	471.1	604.9	268.5	123.2	1.000105
28200.0	320.0	-34.9	-77.2		467.9	601.3	268.4	124.6	1.000104
28000.0	317.2	-35.5	-77.5		464.9	600.6	268.3	126.1	1.000104
27800.0	314.4	-36.0	-78.9		462.0	599.9	268.2	127.6	1.000103
27600.0	311.7	-36.6	-79.6		459.0	599.2	268.0	129.7	1.000102
27400.0	309.0	-37.2	-79.4		456.1	598.4	267.9	131.7	1.000102
27200.0	306.3	-37.5	-79.5		453.2	597.7	267.7	133.7	1.000101
27000.0	303.6	-38.3	-79.6		450.4	597.0	267.6	135.6	1.000100
26800.0	300.9	-38.9	-79.9		447.5	596.3	267.3	138.7	1.000100
26600.0	298.3	-39.4	-79.8		444.6	595.6	267.1	141.9	1.000099
26400.0	295.6	-39.9	-79.9		441.5	594.9	266.9	145.0	1.000098
26200.0	292.9	-40.4	-80.0		438.5	594.3			1.000098
26000.0	290.2	-40.9	-80.2		435.5	593.7			1.000097
25800.0	287.7	-41.4	-81.1		432.6	593.0			1.000096
25600.0	285.1	-41.9	-81.1		429.6	592.4			1.000096
25400.0	282.6	-42.5	-81.2		426.7	591.7			1.000095
25200.0	280.0	-43.0	-81.3		423.8	591.1			1.000094
25000.0	277.6	-43.5	-81.5		421.0	590.4			1.000094
24800.0	275.1	-44.0	-81.5		418.1	589.8			1.000093
24600.0	272.6	-44.5	-81.6		415.3	589.1			1.000092
24400.0	270.2	-45.0	-81.7		412.5	588.5			1.000092
24200.0	267.7	-45.5	-81.8		409.7	587.8			1.000091
24000.0	265.3	-46.0	-81.9		406.9	587.2			1.000091
23800.0	262.9	-46.5	-82.0		404.1	586.5			1.000090
23600.0	260.5	-47.0	-82.1		401.3	585.8			1.000090
23400.0	258.1	-47.5	-82.2		398.5	585.1			1.000089
23200.0	255.7	-48.0	-82.3		395.7	584.4			1.000089
23000.0	253.3	-48.5	-82.4		393.0	583.7			1.000088
22800.0	250.9	-49.0	-82.5		390.2	583.0			1.000087
22600.0	248.5	-49.5	-82.6		387.4	582.3			1.000086
22400.0	246.1	-49.9	-82.7		384.6	581.6			1.000086
22200.0	243.7	-50.3	-82.8		381.8	580.9			1.000085
22000.0	241.3	-50.7	-82.9		379.1	580.2			1.000084
21800.0	238.9	-51.1	-83.0		376.4	583.1			1.000084
21600.0	236.5	-51.5	-83.1		373.7	582.5			1.000083
21400.0	234.1	-51.9	-83.2		371.0	581.9			1.000083

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
A.I.V. 79 0800 HRS MSL
SUBSIDY 1.0. 145

UPPER AIR DATA
31200 JUN 145
JALLET

TABLE 6 (cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS MILLIBARS DEURLES	TEMPERATURE CENTIGRADE	AIR DEPART. CENTIGRADE	REL.HUM. PERCENT	DEPTH METER	DEPTH METERS	SOUND KNOTS	DENSITY OF WATER	INDEX OF REFRACTION:
36100.0	235.4	-50.5			360.3	501.3	360.3	1.000002	
36200.0	233.2	-51.0			365.7	500.6	365.7	1.000001	
36300.0	221.0	-51.5			363.1	500.0	363.1	1.000001	
36500.0	228.9	-51.9			366.5	500.4	366.5	1.000000	
36624.0	220.8	-52.3			357.6	500.9	357.6	1.000000	
37060.0	224.7	-52.7			355.0	500.4	355.0	1.000000	
37200.0	222.9	-53.1			352.3	500.9	352.3	1.000000	
37400.0	220.5	-53.5			349.6	500.4	349.6	1.000000	
37530.0	216.4	-53.8			340.9	500.9	340.9	1.000000	
37700.0	218.3	-54.3			344.4	500.3	344.4	1.000000	
35300.0	214.3	-54.3			341.9	500.0	341.9	1.000000	
35420.0	212.2	-55.3			339.4	500.0	339.4	1.000000	
35480.0	210.2	-55.8			337.0	500.0	337.0	1.000000	
35530.0	209.2	-56.3			334.5	500.7	334.5	1.000000	
35590.0	209.2	-56.3			332.5	500.0	332.5	1.000000	
35640.0	204.3	-57.0			329.7	502.4	329.7	1.000000	
35820.0	202.3	-57.8			327.3	501.7	327.3	1.000000	
35910.0	201.4	-58.3			324.9	501.0	324.9	1.000000	
35990.0	199.5	-58.7			322.4	500.6	322.4	1.000000	
36050.0	195.5	-59.0			319.7	500.1	319.7	1.000000	
40320.0	194.6	-59.3			317.1	500.7	317.1	1.000000	
40380.0	192.7	-59.7			314.5	500.2	314.5	1.000000	
40400.0	190.9	-60.0			311.9	500.4	311.9	1.000000	
40500.0	189.9	-60.3			303.4	500.3	303.4	1.000000	
40550.0	187.2	-60.7			300.9	500.9	300.9	1.000000	
41090.0	185.4	-61.0			304.4	501.5	304.4	1.000000	
41260.0	185.0	-61.3			301.9	507.0	301.9	1.000000	
41400.0	181.8	-61.6			299.4	500.0	299.4	1.000000	
41600.0	180.0	-62.0			297.0	500.1	297.0	1.000000	
41800.0	179.5	-62.3			294.6	500.7	294.6	1.000000	
42090.0	175.3	-62.6			292.2	500.4	292.2	1.000000	
42200.0	174.4	-63.0			289.8	504.8	289.8	1.000000	
42400.0	173.1	-61.0			284.4	507.4	284.4	1.000000	
42500.0	171.4	-60.5			280.9	506.0	280.9	1.000000	
42600.0	169.3	-60.4			276.0	508.3	276.0	1.000000	
43000.0	169.1	-60.8			275.0	507.7	275.0	1.000000	
43200.0	169.5	-61.3			273.7	507.0	273.7	1.000000	
43400.0	164.8	-61.6			271.0	509.4	271.0	1.000000	
43600.0	163.2	-62.2			269.6	505.3	269.6	1.000000	
43800.0	161.6	-62.7			267.5	505.2	267.5	1.000000	

STATION ALTITUDE 4200 FEET A.S.L.
ELEV. 79
ASCE. NO. 1.0. 147

UPPER AIR DATA
3120030145
JULY 1
TABLE 6 (cont)

GEOD. TRAC ALTITUDE PRESSURE TEMPERATURE REL.HUM. DE.SITY OF WIND DIRECTION INDEX
MILLIBARS DEGREES DEGREES CIGARADE PERCENT CUBIC METER KNOTS OF REFRACTION
MILLIBARS DEGREES DEGREES CIGARADE

44300.0	100.0	-65.2	265.5	264.6	265.5	263.4	262.9
44200.0	100.5	-65.6	265.5	264.9	265.5	264.4	263.9
44100.0	100.9	-66.0	264.1	264.4	264.4	263.9	263.8
44000.0	100.4	-64.5	264.5	259.4	262.7	259.4	259.8
43900.0	100.6	-62.0	262.0	257.5	262.0	257.5	257.7
43800.0	100.3	-65.5	265.5	255.5	261.4	261.4	261.2
43700.0	100.0	-65.9	265.9	255.6	260.3	260.3	260.3
43600.0	100.2	-65.3	265.3	255.5	260.2	260.2	260.2
43500.0	100.1	-67.0	260.7	249.4	259.6	249.4	249.6
43400.0	100.4	-67.0	247.0	247.3	259.3	247.0	247.0
43300.0	100.5	-64.9	267.3	245.2	266.9	245.2	245.2
43200.0	100.6	-67.7	267.7	245.2	266.5	245.2	245.2
43100.0	100.9	-65.0	265.0	241.1	266.0	241.1	241.1
43000.0	100.9	-68.3	268.3	239.1	267.6	239.1	239.3
42900.0	100.9	-63.2	263.2	237.6	267.2	237.6	237.6
42800.0	100.0	-68.5	268.5	234.5	257.4	234.5	234.5
42700.0	100.5	-68.4	268.4	232.0	257.5	232.0	232.0
42600.0	100.6	-65.0	265.0	229.5	257.7	229.5	229.5
42500.0	100.7	-63.7	263.7	227.1	257.9	227.1	227.1
42400.0	100.7	-62.4	262.4	224.7	256.0	224.7	224.7
42300.0	100.8	-51.0	251.0	222.3	256.2	222.3	222.3
42200.0	100.1	-29.7	229.7	219.9	256.4	219.9	219.9
42100.0	100.0	-26.4	226.4	217.0	256.5	217.0	217.0
42000.0	100.0	-27.1	227.1	215.3	256.7	215.3	215.3
41900.0	100.0	-26.0	226.0	213.0	256.9	213.0	213.0
41800.0	100.0	-26.4	226.4	213.5	256.9	213.5	213.5
41700.0	100.0	-25.0	225.0	207.9	256.1	207.9	207.9
41600.0	100.0	-22.1	222.1	205.3	256.5	205.3	205.3
41500.0	100.0	-20.9	220.9	202.7	251.5	202.7	202.7
41400.0	100.0	-19.7	219.7	200.2	252.2	200.2	200.2
41300.0	100.0	-18.5	218.5	197.7	253.0	197.7	197.7
41200.0	100.0	-17.3	217.3	195.9	254.7	195.9	195.9
41100.0	100.0	-16.0	216.0	194.3	256.0	194.3	194.3
41000.0	100.0	-14.8	214.8	192.7	256.4	192.7	192.7
40900.0	100.0	-13.6	213.6	191.1	256.8	191.1	191.1
40800.0	100.0	-12.4	212.4	189.5	257.1	189.5	189.5
40700.0	100.0	-11.2	211.2	187.9	257.4	187.9	187.9
40600.0	100.0	-10.0	210.0	186.3	257.7	186.3	186.3
40500.0	100.0	-8.8	208.8	184.7	258.1	184.7	184.7
40400.0	100.0	-7.6	207.6	183.1	258.4	183.1	183.1
40300.0	100.0	-6.4	206.4	181.5	258.7	181.5	181.5
40200.0	100.0	-5.2	205.2	180.0	259.0	180.0	180.0
40100.0	100.0	-4.0	204.0	178.4	259.3	178.4	178.4
40000.0	100.0	-2.8	202.8	176.8	259.6	176.8	176.8
39900.0	100.0	-1.6	201.6	175.2	259.9	175.2	175.2
39800.0	100.0	-0.4	200.4	173.6	260.2	173.6	173.6
39700.0	100.0	1.0	199.0	172.0	260.5	172.0	172.0
39600.0	100.0	2.2	197.8	170.4	260.8	170.4	170.4
39500.0	100.0	3.4	196.6	168.8	261.1	168.8	168.8
39400.0	100.0	4.6	195.4	167.2	261.4	167.2	167.2
39300.0	100.0	5.8	194.2	165.6	261.7	165.6	165.6
39200.0	100.0	7.0	193.0	164.0	262.0	164.0	164.0
39100.0	100.0	8.2	191.8	162.4	262.3	162.3	162.3
39000.0	100.0	9.4	190.6	160.8	262.6	160.8	160.8
38900.0	100.0	10.6	189.4	159.2	262.9	159.2	159.2
38800.0	100.0	11.8	188.2	157.6	263.2	157.6	157.6
38700.0	100.0	13.0	187.0	156.0	263.5	156.0	156.0
38600.0	100.0	14.2	185.8	154.4	263.8	154.4	154.4
38500.0	100.0	15.4	184.6	152.8	264.1	152.8	152.8
38400.0	100.0	16.6	183.4	151.2	264.4	151.2	151.2
38300.0	100.0	17.8	182.2	149.6	264.7	149.6	149.6
38200.0	100.0	19.0	181.0	148.0	265.0	148.0	148.0
38100.0	100.0	20.2	180.8	146.4	265.3	146.4	146.4
38000.0	100.0	21.4	179.6	144.8	265.6	144.8	144.8
37900.0	100.0	22.6	178.4	143.2	265.9	143.2	143.2
37800.0	100.0	23.8	177.2	141.6	266.2	141.6	141.6
37700.0	100.0	25.0	176.0	140.0	266.5	140.0	140.0
37600.0	100.0	26.2	174.8	138.4	266.8	138.4	138.4
37500.0	100.0	27.4	173.6	136.8	267.1	136.8	136.8
37400.0	100.0	28.6	172.4	135.2	267.4	135.2	135.2
37300.0	100.0	29.8	171.2	133.6	267.7	133.6	133.6
37200.0	100.0	31.0	170.0	132.0	268.0	132.0	132.0
37100.0	100.0	32.2	168.8	130.4	268.3	130.4	130.4
37000.0	100.0	33.4	167.6	128.8	268.6	128.8	128.8
36900.0	100.0	34.6	166.4	127.2	268.9	127.2	127.2
36800.0	100.0	35.8	165.2	125.6	269.2	125.6	125.6
36700.0	100.0	37.0	164.0	124.0	269.5	124.0	124.0
36600.0	100.0	38.2	162.8	122.4	269.8	122.4	122.4
36500.0	100.0	39.4	161.6	120.8	270.1	120.8	120.8
36400.0	100.0	40.6	160.4	119.2	270.4	119.2	119.2
36300.0	100.0	41.8	159.2	117.6	270.7	117.6	117.6
36200.0	100.0	43.0	158.0	116.0	271.0	116.0	116.0
36100.0	100.0	44.2	156.8	114.4	271.3	114.4	114.4
36000.0	100.0	45.4	155.6	112.8	271.6	112.8	112.8
35900.0	100.0	46.6	154.4	111.2	271.9	111.2	111.2
35800.0	100.0	47.8	153.2	109.6	272.2	109.6	109.6
35700.0	100.0	49.0	152.0	108.0	272.5	108.0	108.0
35600.0	100.0	50.2	150.8	106.4	272.8	106.4	106.4
35500.0	100.0	51.4	149.6	104.8	273.1	104.8	104.8
35400.0	100.0	52.6	148.4	103.2	273.4	103.2	103.2
35300.0	100.0	53.8	147.2	101.6	273.7	101.6	101.6
35200.0	100.0	55.0	146.0	100.0	274.0	100.0	100.0
35100.0	100.0	56.2	144.8	98.4	274.3	98.4	98.4
35000.0	100.0	57.4	143.6	96.8	274.6	96.8	96.8
34900.0	100.0	58.6	142.4	95.2	274.9	95.2	95.2
34800.0	100.0	59.8	141.2	93.6	275.2	93.6	93.6
34700.0	100.0	61.0	140.0	92.0	275.5	92.0	92.0
34600.0	100.0	62.2	138.8	90.4	275.8	90.4	90.4
34500.0	100.0	63.4	137.6	88.8	276.1	88.8	88.8
34400.0	100.0	64.6	136.4	87.2	276.4	87.2	87.2
34300.0	100.0	65.8	135.2	85.6	276.7	85.6	85.6
34200.0	100.0	67.0	134.0	84.0	277.0	84.0	84.0
34100.0	100.0	68.2	132.8	82.4	277.3	82.4	82.4
34000.0	100.0	69.4	131.6	80.8	277.6	80.8	80.8
33900.0	100.0	70.6	130.4	79.2	277.9	79.2	79.2
33800.0	100.0	71.8	129.2	77.6	278.2	77.6	77.6
33700.0	100.0	73.0	128.0	76.0	278.5	76.0	76.0
33600.0	100.0	74.2	126.8	74.4	278.8	74.4	74.4
33500.0	100.0	75.4	125.6	72.8	279.1	72.8	72.8
33400.0	100.0	76.6	124.4	71.2	279.4	71.2	71.2
33300.0	100.0	77.8	123.2	69.6	279.7	69.6	69.6
33200.0	100.0	79.0	122.0	68.0	280.0	68.0	68.0
33100.0	100.0	80.2	120.8	66.4	280.3	66.4	66.4
33000.0	100.0	81.4	119.6	64.8	280.6	64.8	64.8
32900.0	100.0	82.6	118.4	63.2	280.9	63.2	63.2
32800.0	100.0	83.8	117.2	61.6	281.2	61.6	61.6
32700.0	100.0	85.0	116.0	60.0	281.5	60.0	60.0
32600.0	100.0	86.2	114.8	58.4	281.8	58.4	58.4
32500.0	100.0	87.4	113.6	56.8	282.1	56.8	56.8
32400.0	100.0	88.6	112.4	55.2	282.4	55.2	55.2
32300.0	100.0	89.8	111.2	53.6	282.7	53.6	53.6
32200.0	100.0	91.0	110.0	52.0	283.0	52.0	52.0
32100.0	100.0	92.2	108.8	50.4	283.3	50.4	50.4
32000.0	100.0	93.4	107.6	48.8	283.6	48.8	48.8
31900.0	100.0	94.6	106.4	47.2	283.9	47.2	47.2
31800.0	100.0	95.8	105.2	45.6	284.2	45.6	45.6
31700.0	100.0	97.0	104.0	44.0	284.5	44.0	44.0
31600.0	100.0	98.2	102.8	42.4	284.8	42.4	42.4
31500.0	100.0	99.4	10				

STATION ALTITUDE 4051.00 FEET MSL
6 Aug. 79 0800 hrs MST
ASCE. SLOP. 110. 145

UPPER AIR ANALYSIS
JULY 1979
TABLE 6 (cont)

STATION	RELATIVE HUMIDITY	TEMPERATURE	REL. HUM.	DENSITY	WIND DATA	INDEX
ATLANTIC	PERCENT	AIR DEPARTURE	PERCENT	GAS/CUBIC	DIRCTIO	OF
MSL FELT	MILLIBARS	DEGREES CENTRIGRADE	METER	SCM	DEGREES	REFRACTION
32100.0	107.2	-66.7	100.4	500.7	1.000040	
32200.0	105.4	-65.1	100.6	500.6	1.000040	
32300.0	105.1	-65.2	100.5	500.5	1.000039	
32400.0	104.1	-65.3	100.5	500.5	1.000039	
32500.0	103.9	-66.4	100.5	500.5	1.000039	
32600.0	102.9	-66.5	100.5	500.5	1.000039	
32700.0	101.0	-65.9	100.6	500.6	1.000038	
32800.0	100.0	-65.2	100.7	500.7	1.000037	
32900.0	99.0	-65.0	100.7	500.7	1.000037	
33000.0	98.3	-64.7	100.9	500.4	1.000036	
33100.0	97.1	-64.6	102.1	500.8	1.000036	
34200.0	99.1	-64.2	100.3	500.1	1.000036	
34400.0	99.2	-64.0	100.3	500.4	1.000035	
34600.0	94.2	-63.8	100.6	500.7	1.000035	
34800.0	95.5	-63.5	100.1	504.0	1.000035	
35000.0	92.4	-63.5	100.4	504.4	1.000034	
35200.0	91.5	-63.1	101.7	504.7	1.000034	
35429.6	90.6	-62.8	100.0	500.0	1.000033	
35600.0	89.7	-62.5	100.4	500.4	1.000033	
35800.0	89.8	-62.0	100.5	500.1	1.000032	
36000.0	89.0	-61.2	104.5	507.2	1.000032	
36200.0	87.1	-60.4	102.6	500.2	1.000031	
36400.0	89.3	-59.7	100.0	500.2	1.000031	
36600.0	85.4	-59.5	139.3	500.5	1.000031	
36800.0	84.6	-59.3	137.8	500.8	1.000031	
37000.0	85.5	-59.0	130.3	570.0	1.000030	
37299.8	85.9	-59.2	135.1	500.9	1.000030	
37499.8	82.2	-59.4	133.9	500.5	1.000030	
37600.0	81.4	-59.7	132.4	500.2	1.000030	
37799.1	81.6	-59.9	131.7	500.9	1.000029	
37999.1	77.3	-60.2	130.3	500.5	1.000029	
38299.1	79.0	-60.4	129.4	500.2	1.000029	
38499.3	76.3	-60.7	123.3	500.9	1.000029	
38699.6	77.5	-60.9	127.2	507.5	1.000029	
38800.0	76.7	-61.2	126.1	507.2	1.000028	
39099.6	76.0	-61.4	125.0	500.9	1.000028	
39299.6	75.3	-61.7	124.0	500.2	1.000028	
39499.6	74.5	-61.9	122.9	500.2	1.000027	
39699.6	75.8	-62.2	121.9	503.9	1.000027	
39899.6	73.1	-62.4	120.4	500.0	1.000027	

STATION ALTITUDE 4,051.70 FEET MSL
840V. 7900 HKS MSL
ASCE SECTION 140. 145

UPPLR AIR DATA
3120030145
WALLEN

TABLE 6 (cont)

CHRONO. TIME	PRESSURE ALTITUDE IN FEET	TEMPERATURE AIR IN DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY OF CUBIC FEET	WIND SPEED KILOTS	WIND DIRECTION DEGREES NORTH	INDEX OF REFRACTION
001.00.0	72.4	-62.7	119.8	502.2	1.000027		
001.00.0	71.7	-62.9	118.9	504.9	1.000026		
001.00.0	71.9	-63.1	117.7	504.6	1.000025		
001.00.0	70.5	-63.4	116.7	504.2	1.000025		
001.00.0	69.8	-63.4	115.6	504.2	1.000026		
001.00.0	69.9	-63.3	114.4	504.4	1.000025		
001.00.0	68.3	-63.1	113.2	504.6	1.000025		
001.00.0	67.6	-63.0	112.0	504.3	1.000025		
001.00.0	67.9	-62.9	110.9	503.9	1.000025		
001.00.0	69.5	-62.8	109.7	505.2	1.000024		
001.00.0	69.7	-62.3	106.8	505.4	1.000024		
002.00.0	69.0	-62.3	107.4	505.6	1.000024		
002.00.0	69.0	-62.3	106.3	505.9	1.000024		
002.00.0	69.6	-62.0	105.2	506.1	1.000023		
002.00.0	69.1	-61.9	104.1	506.3	1.000023		
002.00.0	69.5	-61.7	103.0	506.5	1.000023		
002.00.0	69.9	-61.6	102.0	506.7	1.000023		
002.00.0	61.3	-61.4	100.9	506.9	1.000022		
002.00.0	60.7	-61.3	99.9	507.1	1.000022		
002.00.0	60.1	-61.1	95.0	507.5	1.000022		
004.00.0	59.6	-61.0	97.6	507.9	1.000022		
004.00.0	57.9	-60.5	90.6	507.7	1.000022		
004.00.0	57.9	-60.5	94.9	507.1	1.000021		
004.00.0	56.7	-60.2	90.3	506.5	1.000021		
004.00.0	56.7	-60.2	92.6	506.5	1.000021		
004.00.0	56.4	-60.7	91.3	505.7	1.000020		
004.00.0	55.6	-59.9	95.9	505.9	1.000020		
004.00.0	55.1	-59.1	89.9	509.1	1.000020		
005.00.0	54.6	-59.6	89.0	509.3	1.000020		
005.00.0	54.6	-59.6	95.4	507.0	1.000019		
005.00.0	54.0	-59.4	84.5	509.4	1.000019		
005.00.0	53.0	-59.4	87.2	509.7	1.000019		
005.00.0	53.0	-59.1	86.3	509.9	1.000019		
005.00.0	52.3	-59.0	85.4	507.2	1.000019		
005.00.0	52.0	-53.6	84.5	507.4	1.000018		
005.00.0	51.5	-58.7	85.9	507.0	1.000018		
005.00.0	51.0	-58.5	82.7	507.3	1.000018		
005.00.0	50.5	-58.3	81.9	507.1	1.000018		
005.00.0	50.0	-58.2	81.0	507.2	1.000018		
005.00.0	49.5	-58.2	80.2	507.1	1.000018		

STATION ALTITUDE 4051.00 FEET MSL
A.D.V. 79 0600 hrs ASI
ASU.SAN. 10. 145

UPPER AIR DATA
31200JULY5
JULIAN

GLOBALIC COORDINATES
33.16712 LAT deg
106.49511 LON deg

TABLE 6 (cont)

ATMOSPHERIC PRESSURE ALTITUDE MSL INCHES	TEMPERATURE AIR DEGREES MILLIBARS	REL.HUM. PERCENT	INDEX OF REFRACTION
000.69.0	49.0 49.0	-54.0 -54.0	1.000018
002.60.0	48.0 48.0	-56.1 -56.1	1.000018
004.61.0	46.1 46.1	-58.1 -58.1	1.000017
006.62.0	47.6 47.6	-58.1 -58.1	1.000017
008.63.0	47.2 47.2	-58.0 -58.0	1.000017
010.64.0	46.7 46.7	-58.0 -58.0	1.000017

STATION ALTIITUDE 4951.00 FEET MSL
ELEV. 79 UTM 10S
ASCE.50. NO. 145

TABLE 7

GEODETIC COORDINATES
 33° 16' 712 LAT LEG
 106° 49' 511 LONG LEG

TABLE 7

PRESSURE MILLIBARS	GLOBAL THERMAL FLUX	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOSITION PENCLIN	PRECIP. PENCLIN	DIRECT IN DEGREES(°)	WIN DATA SPECI KHOI
850.0	4659.	11.2	6.5	7.0	221.5	0.5
800.0	8559.	9.1	3.0	6.9	236.4	3.0
750.0	6164.	5.5	1.1	7.5	248.7	3.3
700.0	9944.	7	-2.2	8.1	250.6	7
650.0	11816.	-3.2	-6.5	7.6	252.7	5
600.0	13651.	-6.6	-6.7	6.9	245.9	0.0
550.0	10155.	-12.7	-21.2	4.9	242.2	1.1
500.0	16529.	-16.9	-20.6	7.4	231.8	6.4
450.0	21116.	-20.9	-25.1	6.9	253.0	71.8
400.0	2339.	-25.3	-43.1	1.7	254.8	4.1
350.0	27935.	-31.5	-49.0	10.	266.5	12.4
300.0	36612.	-39.1			267.3	134.6
250.0	34629.	-47.5				
200.0	39351.	-50.4				
175.0	42878.					
150.0	45163.					
125.0	46792.					
100.0	53261.					
80.0	57771.					
70.0	60443.					
60.0	63626.					
50.0	67347.					